PDC LABORATORIES, INC.

Inorganics QC Checklist

Workbook Page: _____

Work Group: 185910

Analysis Date: 04-13-09

Analyst: Tin

	N/A	Yes	No	"Exceptions" Comments / Corrective Action
Is the method blank free of contamination?		✓		
Are the recoveries from the lab control sample acceptable?		✓		
Are reported values consistent with the required units?		✓		
Are the detection limits reported correctly?		✓		
Are dilution factors entered correctly?		✓		
Is the calibration curve correlation coefficient acceptable (r≥0.995)?		✓		
Are the ICV and CCVs within criteria? If not, is an appropriate explanation provided?		✓		
Are the MS/MSD recoveries within the acceptance limits? If not, are the samples appropriately flagged?		✓	✓	
Batch checked for data entry errors? (for electronic data transfer only)	✓			

Note: Any "No" answer required a comment.

Additional comments:

Completed By: Tin J. Hb
Date: 04-13-09

Reviewed By:
Date:

Reviewed By:
Date:

Reviewed By:
Date:

Author: lgtth

Date : 4/13/2009

	Action	Continue						
DQM Test: < - Percent Relative Difference								
	Result:	-1.1 < 10.0						
	Message	Pass						
	Action	None						
ccb	S11	-0.0405	0.107	4/13/2009@1:43:38 PM				
	Known Conc:	0.00						
DQM Test: > + Concentration Limit								
	Result:	-0.0405 < 0.200						
	Message	Pass						
	Action	Continue						
DQM Test: < - Concentration Limit								
	Result:	-0.0405 > -0.200						
	Message	Pass						
	Action	None						
09042052-12;sol	87	-0.141	-0.0332	4/13/2009@1:45:11 PM				
09042052-12	88	-0.0997	0.0240	4/13/2009@1:46:00 PM				
09042052-13;sol	89	1.95	2.88	4/13/2009@1:46:50 PM				
09042052-13	90	1.91	2.83	4/13/2009@1:47:39 PM				
09042052-14;sol	91	-0.152	-0.0486	4/13/2009@1:48:30 PM				
09042052-14	92	-0.138	-0.0298	4/13/2009@1:49:23 PM				
09042052-15;sol	93	-0.132	-0.0210	4/13/2009@1:50:17 PM				
09042052-15	94	-0.100	0.0230	4/13/2009@1:51:09 PM				
09042052-16;sol	95	0.0491	0.231	4/13/2009@1:52:02 PM				
09042052-16;sol ms	96	1.89	2.80	4/13/2009@1:52:55 PM				
ccv 15.0	S10	14.9	20.9	4/13/2009@1:53:45 PM				
	Known Conc:	15.0						99.3%
DQM Test: > + Percent Relative Difference								
	Result:	-0.7 < 10.0						
	Message	Pass						
	Action	Continue						
DQM Test: < - Percent Relative Difference								
	Result:	-0.7 < 10.0						
	Message	Pass						
	Action	None						
ccb	S11	-0.0395	0.108	4/13/2009@1:55:18 PM				
	Known Conc:	0.00						
DQM Test: > + Concentration Limit								
	Result:	-0.0395 < 0.200						
	Message	Pass						
	Action	Continue						
DQM Test: < - Concentration Limit								
	Result:	-0.0395 > -0.200						
	Message	Pass						
	Action	None						ms 92.0%
09042052-16;sol msd	97	2.20	3.23	4/13/2009@1:56:51 PM				msd 107.5%
09042052-16	98	0.110	0.316	4/13/2009@1:57:43 PM				RPD 15.2%
09042052-17;sol	99	-0.0921	0.0346	4/13/2009@1:58:34 PM				
09042052-17	100	-0.187	-0.0973	4/13/2009@1:59:26 PM				
09042052-18;sol	101	-0.167	-0.0690	4/13/2009@2:00:17 PM				
09042052-18	102	-0.167	-0.0696	4/13/2009@2:01:08 PM				
09042005-6;sol	58	0.00512	0.170	4/13/2009@2:01:58 PM				
09042316-1p	103	1.09e+3	30.4	4/13/2009@2:02:48 PM		50.00		ms 66%
09042054-1	104	'R' -0.117	0.00	4/13/2009@2:03:38 PM				msd 94.5%
090420541 ms	105	1.32	2.00	4/13/2009@2:04:28 PM				RPD 35.5%
09042054-1 msd	106	1.89	2.79	4/13/2009@2:05:20 PM				
ccv 15.0	S10	15.0	21.0	4/13/2009@2:06:11 PM				100%
	Known Conc:	15.0						
DQM Test: > + Percent Relative Difference								
	Result:	-0.3 < 10.0						
	Message	Pass						
	Action	Continue						
DQM Test: < - Percent Relative Difference								
	Result:	-0.3 < 10.0						
	Message	Pass						
	Action	None						
ccb	S11	-0.0336	0.116	4/13/2009@2:07:44 PM				
	Known Conc:	0.00						

Author: lgtth

Date : 4/13/2009

DQM Test: > + Concentration Limit								
	Result:	-0.0336 < 0.200						
	Message	Pass						
	Action	Continue						
DQM Test: < - Concentration Limit								
	Result:	-0.0336 > -0.200						
	Message	Pass						
	Action	None						
mb dist wg185841	107	-0.224	0.101	4/13/2009@2:10:20 PM		5.00		MB <1.0
lcs dist	108	45.3	12.8	4/13/2009@2:11:14 PM		5.00		LCS 90.6%
~~09033783-2;dist~~	~~109~~	~~2.42~~	~~3.53~~	~~4/13/2009@2:12:08 PM~~				
09033783-2;dist	109	8.32	11.7	4/13/2009@2:13:31 PM		5.00		
09033923-2;dist	110	33.5	9.50	4/13/2009@2:15:10 PM		5.00		
09034012-2;dist	111	38.4	10.8	4/13/2009@2:16:03 PM		5.00		
spk 09034103-2;dist ms	112	85.5	24.0	4/13/2009@2:16:56 PM		5.00		
09034103-2;dist msd	113	38.9	11.0	4/13/2009@2:17:48 PM		5.00		
09034103-2;dist	114	38.8	11.0	4/13/2009@2:18:40 PM		5.00		
09041073-2;dist	115	36.8	10.4	4/13/2009@2:19:31 PM		5.00		
ccv 15.0	S10	15.0	21.1	4/13/2009@2:20:21 PM				100%
	Known Conc:	15.0						
DQM Test: > + Percent Relative Difference								
	Result:	0.1 < 10.0						
	Message	Pass						
	Action	Continue						
DQM Test: < - Percent Relative Difference								
	Result:	0.1 < 10.0						
	Message	Pass						
	Action	None						
ccb	S11	-0.0321	0.118	4/13/2009@2:22:09 PM				
	Known Conc:	0.00						
DQM Test: > + Concentration Limit								
	Result:	-0.0321 < 0.200						
	Message	Pass						
	Action	Continue						
DQM Test: < - Concentration Limit								
	Result:	-0.0321 > -0.200						
	Message	Pass						
	Action	None						
09041091-2;dist	116	2.28	0.798	4/13/2009@2:23:43 PM		5.00		
09033753-2;dist	117	-0.126	0.128	4/13/2009@2:24:34 PM		5.00		ms 92.2%
09033753-2;dist ms	118	46.1	13.0	4/13/2009@2:25:25 PM		5.00		msd 93.2%
09033753-2;dist msd	119	46.6	13.1	4/13/2009@2:26:16 PM		5.00		RPD 1.1%
09033851-1;dist	120	29.5	8.37	4/13/2009@2:27:06 PM		5.00		
09033832-1;dist	121	3.58	1.16	4/13/2009@2:27:58 PM		5.00		
09033832-3;dist	122	28.6	8.14	4/13/2009@2:28:53 PM		5.00		
09033844-1;dist	123	55.5	15.6	4/13/2009@2:29:46 PM		5.00		
09041396-2;dist	124	32.8	9.31	4/13/2009@2:30:40 PM		5.00		
09041395-1;dist	125	-0.126	0.128	4/13/2009@2:31:33 PM		5.00		
ccv 15.0	S10	14.9	20.9	4/13/2009@2:32:24 PM				99.3%
	Known Conc:	15.0						
DQM Test: > + Percent Relative Difference								
	Result:	-0.9 < 10.0						
	Message	Pass						
	Action	Continue						
DQM Test: < - Percent Relative Difference								
	Result:	-0.9 < 10.0						
	Message	Pass						
	Action	None						
ccb	S11	-0.0397	0.108	4/13/2009@2:34:40 PM				
	Known Conc:	0.00						
DQM Test: > + Concentration Limit								
	Result:	-0.0397 < 0.200						
	Message	Pass						
	Action	Continue						
DQM Test: < - Concentration Limit								
	Result:	-0.0397 > -0.200						
	Message	Pass						
	Action	None						

Author: lgtth

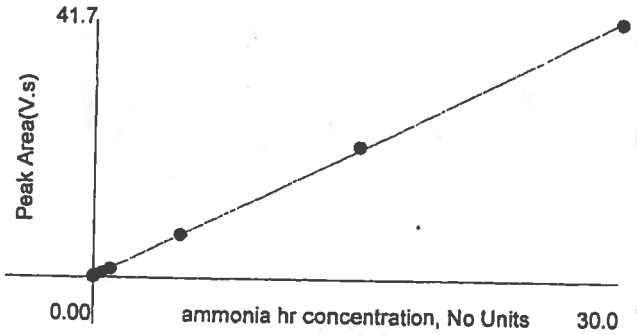
Date : 4/13/2009

	Result:	-2.0 < 10.0					
	Message	Pass					
	Action	Continue					
DQM Test: < - Percent Relative Difference							
	Result:	-2.0 < 10.0					
	Message	Pass					
	Action	None					
ccb	S11	-0.0501	0.0932	4/13/2009@3:09:27 PM			
	Known Conc:	0.00					
DQM Test: > + Concentration Limit							
	Result:	-0.0501 < 0.200					
	Message	Pass					
	Action	Continue					
DQM Test: < - Concentration Limit							
	Result:	-0.0501 > -0.200					
	Message	Pass					
	Action	None					
Sample128	1	-0.139	-0.0300	4/13/2009@3:11:00 PM			
Sample129	1	2.15	3.16	4/13/2009@3:11:51 PM			

Table 1: ammonia hr

	Conc. ()	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	30.0	1	41.7	5.83	0.6	4/13/2009	11:13:11 AM
2	15.0	1	21.6	3.13	-2.4	4/13/2009	11:13:58 AM
3	5.00	1	7.14	1.03	-0.1	4/13/2009	11:14:47 AM
4	1.00	1	1.41	0.203	9.6	4/13/2009	11:15:37 AM
5	0.500	1	0.808	0.110	6.2	4/13/2009	11:16:28 AM
6	0.100	1	0.402	0.0588	-32.1	4/13/2009	11:17:19 AM
7	0.0500	1	0.139	0.00119	40.6	4/13/2009	11:18:12 AM
8	0.00	1	0.0926	0.0118		4/13/2009	11:19:05 AM

Figure 1: ammonia hr



Area = 1.39 * Conc + 0.165
Conc = 0.718 * Area - 0.117
Correlation Coefficient (r) = 0.99988

No Weighting

PDC Laboratories, Inc.

HEXANE EXTRACTABLE MATERIALS

Oil and Grease - EPA 1664 A

Analyst: MB Date: 04-03-09 Logbook #: 50 Workgroup#: 185378 Run I.D.#: 239154

LCS Concentration: 40 mg/L LCS Traceability: WC10-24C MS Concentration: 40 mg/L MS Traceability: Ø

Batch Starting Calibration Check at 2.0 mg (± 0.2 mg): 2.0 mg at 1000 mg (± 5 mg): 1000.1 mg RDL: 5.0 mg/L

Extraction Date/Time: 04-03-09/1400 Evaporation Date/Time: 04-03-09/1400

Sample ID	Sample Vol (mL)	pH √	Dry Weight (g)	Tare Weight (g)	Difference (g)	HEM (mg/L)	Sec #	Comments
MB	1000 mL	✓	2.5745	2.5741	0.0004	<5	1	
LCS		✓	2.6174	2.5784	0.0390	39.0	1	97.5%
LCSD		✓	2.6273	2.5937	0.0336	33.6	2	84.0%
LCST		✓	2.6286	2.5969	0.0317	31.7	3	79.3%
09033753-2C	710	✓	2.5867	2.5863	0.0004	<7	2	
3832-2A	960	✓	2.5824	2.5825	-0.0001	<5	3	
3945-1C	890	✓	2.5695	2.5695	0.0000	<6	1	
09041086-1E	870	✓	2.5891	2.5892	-0.0001	<6	2	
1097-2B	960	✓	2.5905	2.5904	0.0001	<5	3	
1074-2C	880	✓	2.5994	2.5993	0.0001	<6	2	
1018-1F	820	✓	2.5898	2.5895	0.0003	<6	1	
1075-1B	960	✓	2.5770	2.5770	0.0000	<5	3	<3
1271-1A	850	✓	2.5705	2.5668	0.0037	<6	1	
1063-2F	870	✓	2.5912	2.5843	0.0069	7.9	2	
1192-1C	850	✓	2.5960	2.5957	0.0003	<6	3	
1067-2B	880	✓	2.6384	2.5968	0.0416	47	1	
1025-2A	880	✓	2.6058	2.5870	0.0188	21	2	
1126-2A	870	✓	2.5994	2.5964	0.0030	<6	3	
1208-1E	820	✓	2.5878	2.5875	0.0003	<6	1	tph <6
1128-2B	810	✓	2.5912	2.5844	0.0068	8.4	2	
1179-1A	870	✓	2.6030	2.6030	0.0000	<6	3	<3
1237-1B	860	✓	2.6192	2.6188	0.0004	<6	1	
1067-1A	110	✓	2.7377	2.5896	0.1481	1300	3	aliquot RDL=45
1063-1F	270	P	3.0622	2.5785	0.4837	1800	2	RDL=19

04-03-09
MB

Batch Ending Calibration Check at 2.0 mg (± 0.2 mg): 2.1 mg at 1000 mg (± 5 mg): 1000.1 mg

HEM (mg/L) = (Dry weight, g - Tare weight, g) * 1000 / sample vol in liters

Analyst: Howard L Butler Date: 04-03-09

Read & Understood By: _____ Date: _____

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PDC LABORATORIES, INC.

Inorganics QC Checklist

Workbook Page: 44

Work Group: 185378

Analysis Date: 04-03-09

Analyst: MB

	N/A	Yes	No	"Exceptions" Comments / Corrective Action
Is the method blank free of contamination?		✓		
Are the recoveries from the lab control sample acceptable?		✓		
Are reported values consistent with the required units?		✓		
Are the detection limits reported correctly?		✓		
Are dilution factors entered correctly?	✓			
Is the calibration curve correlation coefficient acceptable (r>0.995)?	✓			
Are the ICV and CCVs within criteria? If not, is an appropriate explanation provided?	✓			
Are the MS/MSD recoveries within the acceptance limits? If not, are the samples appropriately flagged?	✓			
Batch checked for data entry errors? (for electronic data transfer only)	✓			

Note: Any "No" answer required a comment.

Additional comments:

Completed By: Howard L Butler
Date: 04-03-09

Reviewed By:
Date:

Reviewed By:
Date:

Reviewed By:
Date:

PDC Laboratories, Inc.
1612 N. Lexington Ave.
Springfield, MO 65802
(417) 864-8924
Fax: (417) 864-7081

Corporate Office:
PO Box 9071
Peoria, IL 61612-9071
(800) 752-6651
Fax (309) 692-9689

Laboratory Results

Allen Bush
18942 State Hwy 13
Suite F
Branson West, MO 65737
Attn : Allen Bush

Date Received : 06/11/09 15:15
Report Date : 06/29/09
Customer # : 263426
P.O. Number :
Facility :

Sample No: **09062663-1** Collect Date **06/11/09 11:16**
Client ID : **ROCKAWAY BEACH** Site : **EFFLUENT** Locator : **GRAB**

Parameter	Qualifier	Result	Analysis Date	Analyst
SM (18) 9222D				
Fecal Coliform		30 cfu/100 ml	06/11/09 15:55	CMC/MMO

Sample No: **09062663-2** Collect Date **06/11/09 11:14**
Client ID : **ROCKAWAY BEACH** Site : **EFFLUENT** Locator : **GRAB**

Parameter	Qualifier	Result	Analysis Date	Analyst
EPA 1664 REV 2/99	*** Analyzed at the St. Louis, MO Lab ***			
Hexane Ext. Material (HEM) by LLE	<	5 mg/l	06/17/09 13:30	MEP

Sample No: **09062663-3** Collect Date **06/11/09 12:30**
Client ID : **ROCKAWAY BEACH** Site : **EFFLUENT** Locator : **COMPOSITE**

Parameter	Qualifier	Result	Analysis Date	Analyst
SM (18) 2540D				
Solids, Total Suspended	<	2 mg/l	06/15/09 16:23	MMO
SM (18) 5210B				
Biochemical Oxygen Demand	<	4 mg/l	06/12/09 12:40	MMO

Sample No: **09062663-4** Collect Date **06/11/09 12:34**
Client ID : **ROCKAWAY BEACH** Site : **EFFLUENT** Locator : **COMPOSITE**

Parameter	Qualifier	Result	Analysis Date	Analyst
SM (18) 4500 NH3 B,F	*** Analyzed at the St. Louis, MO Lab ***			
Nitrogen, Ammonia as N Distilled	<	0.1 mg/l	06/16/09 12:00	KE
SM (18) 4500 P B,E	*** Analyzed at the St. Louis, MO Lab ***			
Phosphorus, Total as P		3.1 mg/l	06/23/09 11:16	DM

Laboratory Results

Allen Bush
18942 State Hwy 13
Suite F
Branson West, MO 65737
Attn : Allen Bush

Date Received : 06/11/09 15:15
Report Date : 06/29/09
Customer # : 263426
P.O. Number :
Facility :

Sample No: **09062663-5**
Client ID : **ROCKAWAY BEACH** Site : **INFLUENT** Collect Date **06/11/09 12:00** Locator : **COMPOSITE**

Parameter	Qualifier	Result	Analysis Date	Analyst
SM (18) 2540D				
Solids, Total Suspended		220 mg/l	06/15/09 16:23	MMO
SM (18) 4500 NH3 B,F	*** Analyzed at the St. Louis, MO Lab ***			
Nitrogen, Ammonia as N Distilled		43 mg/l	06/16/09 12:00	KE
SM (18) 4500 P B,E	*** Analyzed at the St. Louis, MO Lab ***			
Phosphorus, Total as P		7.2 mg/l	06/23/09 11:16	DM
SM (18) 5210B				
Biochemical Oxygen Demand		230 mg/l	06/12/09 12:40	MMO

Sample No: **09062663-6**
Client ID : **MERRIAM WOODS** Site : **INFLUENT** Collect Date **06/11/09 12:50** Locator : **COMPOSITE**

Parameter	Qualifier	Result	Analysis Date	Analyst
SM (18) 2540D				
Solids, Total Suspended		240 mg/l	06/15/09 16:23	MMO
SM (18) 4500 NH3 B,F	*** Analyzed at the St. Louis, MO Lab ***			
Nitrogen, Ammonia as N Distilled		40 mg/l	06/16/09 12:00	KE
SM (18) 4500 P B,E	*** Analyzed at the St. Louis, MO Lab ***			
Phosphorus, Total as P		7.9 mg/l	06/23/09 11:16	DM
SM (18) 5210B				
Biochemical Oxygen Demand		210 mg/l	06/12/09 12:40	MMO

Laboratory Results

Allen Bush
18942 State Hwy 13
Suite F
Branson West, MO 65737
Attn : Allen Bush

Date Received : 06/11/09 15:15
Report Date : 06/29/09
Customer # : 263426
P.O. Number :
Facility :

Sample No: **09062663-7** Collect Date **06/11/09 12:58**
Client ID : **BULL CREEK** Site : **INFLUENT** Locator : **COMPOSITE**

Parameter	Qualifier	Result	Analysis Date	Analyst
SM (18) 2540D				
Solids, Total Suspended		340 mg/l	06/15/09 16:23	MMO
SM (18) 4500 NH3 B,F	*** Analyzed at the St. Louis, MO Lab ***			
Nitrogen, Ammonia as N Distilled		48 mg/l	06/16/09 12:00	KE
SM (18) 4500 P B,E	*** Analyzed at the St. Louis, MO Lab ***			
Phosphorus, Total as P		7.4 mg/l	06/23/09 11:16	DM
SM (18) 5210B				
Biochemical Oxygen Demand		270 mg/l	06/12/09 12:40	MMO

Certified by : _____
Chad Cooper, Project Manager

This report shall not be reproduced, except in full, without the written approval of the laboratory.

PDC LABORATORIES, INC.
1612 N. LEXINGTON AVE
SPRINGFIELD, MO 65802

PHONE # 417-864-8924
FAX # 417-864-7081

CHAIN OF CUSTODY RECORD

State where samples collected MO

ALL HIGHLIGHTED AREAS MUST BE COMPLETED BY CLIENT (PLEASE PRINT) - (SAMPLE ACCEPTANCE POLICY ON REVERSE)

1 CLIENT: Allen Bush

ADDRESS:

CITY / STATE / ZIP:

CONTACT PERSON: Allen Bush

PROJECT NUMBER | P.O. NUMBER | MEANS SHIPPED

PHONE NUMBER | FAX NUMBER | DATE SHIPPED

SAMPLER (PLEASE PRINT): Allen Bush

SAMPLER'S SIGNATURE:

MATRIX TYPES: WW-WASTEWATER, DW-DRINKING WATER, GW-GROUND WATER, WWSL-SLUDGE, NAS-SOLID, L'CHT-LEACHATE, OTHER:

3 ANALYSIS REQUESTED

4 (FOR LAB USE ONLY)
LOGIN # 09062663
LOGGED BY: Cme
LAB PROJ. #:
TEMPLATE:
PROJ. MGR.: Chad Cooper

2 SAMPLE DESCRIPTION AS YOU WANT ON REPORT	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE GRAB	SAMPLE TYPE COMP	MATRIX TYPE	BOTTLE COUNT	Fecal	Bod	TSS	T. phos	Ammonia	Oil & Grease		REMARKS
Rockaway Beach EFF	6/11/09	1116	X		WW	1	X							
Rockaway Beach EFF	6/11/09	1114	X		WW	1						X		
Rockaway Beach EFF	6/11/09	1230		X	WW	1		X	X		~~X~~ cme			
Rockaway Beach EFF	6/11/09	1234		X	WW	1			~~X~~ cme	X	X			
" " INF	6/11/09	1200		X	WW	2		X	X	X	X			
merriam Woods INF.	6/11/09	1250		X	WW	2		X	X	X	X			mod. comp.
Bullcreek INF.	6/11/09	1258		X	WW	2		X	X	X	X			mod comp.
~~Rockaway Beach INF.~~	~~6/11/09~~	~~1221~~		~~X~~	~~WW~~	~~2~~		~~X~~	~~X~~	~~X~~	~~X~~ cme			mod. comp
~~"~~ ~~"~~ ~~INF~~														
														Total 10 Sample Bottles COC says 12.

5 TURNAROUND TIME REQUESTED (PLEASE CIRCLE) NORMAL RUSH
(RUSH TAT IS SUBJECT TO PDC LABS APPROVAL AND SURCHARGE)
DATE RESULTS NEEDED
RUSH RESULTS VIA (PLEASE CIRCLE) FAX PHONE
FAX # IF DIFFERENT FROM ABOVE:
PHONE # IF DIFFERENT FROM ABOVE:

6 The sample temperature will be measured upon receipt at the lab. By initialing this area you request that the lab notify you, before proceeding with analysis, if the sample temperature is outside of the range of 0.1-6.0°C. By not initialing this area you allow the lab to proceed with analytical testing regardless of the sample temperature.

7 RELINQUISHED BY: (SIGNATURE) DATE 6/11/09 TIME 1515 | RECEIVED BY: (SIGNATURE) DATE TIME
RELINQUISHED BY: (SIGNATURE) DATE TIME | RECEIVED BY: (SIGNATURE) DATE TIME
RELINQUISHED BY: (SIGNATURE) DATE TIME | RECEIVED AT LAB BY: (SIGNATURE) DATE 6-11-09 TIME 15:15

8 COMMENTS: (FOR LAB USE ONLY)
SAMPLE TEMPERATURE UPON RECEIPT 5.2 °C
CHILL PROCESS STARTED PRIOR TO RECEIPT Y OR N
SAMPLE(S) RECEIVED ON ICE Y OR N
PROPER BOTTLES RECEIVED IN GOOD CONDITION Y OR N
BOTTLES FILLED WITH ADEQUATE VOLUME Y OR N
SAMPLES RECEIVED WITHIN HOLD TIME(S) Y OR N
(EXCLUDES TYPICAL FIELD PARAMETERS)
DATE AND TIME TAKEN FROM SAMPLE BOTTLE

Copies: white should accompany samples to PDC Labs. Yellow copy to be retained by the client.

PDC Laboratories, Inc.

LABORATORY TRANSFER CHAIN OF CUSTODY RECORD

(Samples must be logged to LIMS prior to transfer)

FROM: (Please Circle) Peoria St. Louis Springfield

TO: (Please Circle) Peoria St. Louis Springfield

State where samples collected MO

Reason For Transfer: (check one)

Analysis not performed at Originating lab: ✓
Equipment failure: _____
TAT consideration: _____
Other: _____

PDC PROJECT MANAGER: Chad Cooper

MEANS SHIPPED	DATE SHIPPED
UPS	6/15/09

MATRIX TYPES:
WW-WASTEWATER
DW-DRINKING WATER
GW-GROUND WATER
WWSL-SLUDGE
NAS-SOLID
LCHT-LEACHATE
NAL- NONAQUEOUS
LIQUID
SOIL-SOILS

Originating lab to set log dept. for receiving lab at status ship

Receiving lab to set log dept at status done. Status updated by:

Initial: _____

LIMS SAMPLE NUMBER(S)	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE GRAB	SAMPLE TYPE COMP	MATRIX TYPE	# Bottles Sent	Fecal Coli	GPO	PO4	NH3	Dist				REMARKS
09062663-2	6-11-09	11:14	X		WW	1		X							
-4		12:34		X		1			X	X					
-5		12:00		X		1			X	X					
-6		12:50		X		1			X	X					
-7		12:58		X		1			X	X					

TURNAROUND TIME (RUSH TAT IS SUBJECT TO PDC LABS APROVAL AND SURCHARGE)

☒ Normal (8-10 Bus. Days) ☐ Rush (5 Bus. Days) ☐ *Fastrak™* (3 Bus. Days) ☐ 1-2 Bus. Days ☐ Same Day

DATE DUE _____

RESULTS BY: ☐ E-MAIL ☐ FAX ☐ PHONE CALL PHONE/FAX # IF DIFFERENT FROM ABOVE

DID CLIENT INITIAL THE TEMPERATURE WAIVER Y OR N

COOLER PACKED BY MMD

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY:	DATE	TIME
Michael Ousonoz	6/16/09	15:03	Heather Coalbert	6/16/09	10:00
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY:	DATE	TIME
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME

COC TO BE RETURNED TO ORIGINATING LAB FOR REPORTING PURPOSES

COMMENTS: (FOR LAB USE ONLY)

SAMPLE TEMPERATURE UPON RECEIPT 1.8 °C

CHILL PROCESS STARTED PRIOR TO RECEIPT Y OR N
SAMPLE(S) RECEIVED ON ICE Y OR N
PROPER BOTTLES RECEIVED IN GOOD CONDITION Y OR N
BOTTLES FILLED WITH ADEQUATE VOLUME Y OR N
SAMPLES RECEIVED WITHIN HOLD TIME(S) (EXCLUDES TYPICAL FIELD PARAMETERS) Y OR N
DATE AND TIME TAKEN FROM SAMPLE BOTTLE

PDC LABORATORIES, INC.

BOD Method 5210B(Mod), EPA 405.1 (Mod)

FILE INFORMATION

Date: 6/12/2009 Analyst: MMO
Date: 6/17/2009 Analyst: MMO
Page 1 of 8
FILENAME: 20090612 .xls

PRESSURE IN IN START	28.424
PRESSURE IN MM START	721.9696
PRESSURE IN IN FINISH	28.462
PRESSURE IN MM FINISH	722.9348

REAGENT / STANDARD INFORMATION

	Manuf.	Exp. Date	Lot #	
Glucose:	FISHER		BO118469	SPMO1-8A
Glutamic Acid:	FISHER		45212	SPMO1-7D
PO4 Buffer:	VWR	12/31/2009	8003	SPMO2-4F
MgSO4 Soln:	VWR	10/31/2010	8302	SPMO2-10
CaCl2 Soln:	VWR	7/31/2010	8204	SPMO2-10
FeCl3 Soln:	VWR	8/31/2010	8235	SPMO2-4C
Nitrification Inhibitor:	HACH			
Seed:	SWTP	SWTP		RAW COM
GGA Mixed Soln:	NA	6/26/2009	RLB5-27	

BOD / cBOD QC DATA

	BOTTLE #				
	USB	USB	SB	SB	LCS
Unseeded Blanks					
Unseeded Blank DOi	7.98	7.95			
Unseeded Blank DOf	7.93	7.91			
Seed Controls / Blanks					
ml of Seed			100		
L of Dil. Water			20		
Seeded Blank DOi			7.93	7.94	
Seeded Blank DOf			6.94	6.96	
GGA Knowns					
ml Standard					6
Bottle Volume, ml					300
Dec. Equiv. of % Sample					0.02
Dec. Equiv. of % Dil. Water					0.980
DOi					7.93
DOf					2.88
BOD					204.2

QC ASSESSMENT
Unseeded Blank Depletion, mg/l = 0.045 ACCEPTABLE
Seeded Blank Depletion, mg/l = 0.99 ACCEPTABLE
Known Recovery is ACCEPTABLE

METER CALIBRATION

Set	Date	Time
Cal #1	12-Jun-09	11:35
Cal #2	x	x

Pull	Date	Time
Cal #1	17-Jun-09	12:36
Cal #2	17-Jun-09	13:05

Work Group # WG190117
Run ID:

INCUBATION PERIOD

Time In: 13:05
Time Out: 12:39

DILUTION WATER TEMPATURE
TEMP: 21.08
RANGE 19-21

Revision 7D 1/21/2004 WJM

* If no, adjust between 6.5 and 7.5

PDC LABORATORIES, INC.

FILENAME: 20090612 .xls

BOD / cBOD SAMPLE DATA

Time of Dilutions (per page)	12:40											
CLIENT	ROCKAWAY BEACH INFLUENT				ROCKAWAY BEACH INFLUENT DUPLICATE				ROCKAWAY BEACH EFFLUENT			
SAMPLE #	09062663-5A				09062663-5A				09062663-3A			
pH between 6.5 and 7.5 *	YES				YES				YES			
Chlorine Check / ml titrant	neg/ 0 ml titrant				negative / 0 ml titrant				negative / 0 ml titrant			
Nitrification Inhibitor Added	NO				NO				NO			
Filtered	NO				NO				NO			
Bottle #	11	12	13	14	21	22	23	24	31	32	33	34
Sample Vol., ml	3.0	5.0	10.0	15.0	3.0	5.0	10.0	15.0	5.0	10.0	15.0	30.0
Bottle Vol., ml	300	300	300	300	300	300	300	300	60	60	60	60
DOi of Sample	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	6.82	6.82	6.82	6.82
Dec. Equiv. of % Sample	0.010	0.017	0.033	0.050	0.010	0.017	0.033	0.050	0.083	0.167	0.250	0.500
Dec. Equiv. of % Dil. Water	0.990	0.983	0.967	0.950	0.990	0.983	0.967	0.950	0.917	0.833	0.750	0.500
DOi of Bottle	7.87	7.82	7.71	7.60	7.87	7.82	7.71	7.60	7.84	7.75	7.66	7.38
DOf of Bottle	4.52	3.14	0.21	0.00	4.55	2.85	0.21	0.00	6.66	6.71	6.63	6.44
Depletion	2.37	3.71	6.55	6.66	2.34	4.00	6.55	6.66	0.28	0.22	0.29	0.45
Dilution Factor	1	1	1	1	1	1	1	1	1	1	1	1
Bottle Specific BOD	237.290	222.890	196.490	133.290	234.290	240.290	196.490	133.290	3.350	1.310	1.150	0.890
BOD of Useable Bottles	237.29	222.89			234.29	240.29						0.89
Average Useable BOD	230.09				237.29				0.89			
Reportable BOD	230.1				237.3				0.9			
Reported BOD	BOD = 230.1				BOD = 237.3				BOD = <4			

RPD = -3.1 Acceptable

Revision 7D 1/21/2004 WJM

* If no, adjust between 6.5 and 7.5

PDC LABORATORIES, INC.

FILENAME: 20090612 .xls

BOD / cBOD SAMPLE DATA

Time of Dilutions (per page)	12:40											
CLIENT	MERRIAM WOODS INFLUENT				BULL CREEK INFLUENT				B CD INFLUENT			
SAMPLE NUMBER	09062663-6A				09062663-7A				09062699-1A			
pH between 6.5 and 7.5 *	YES				YES				YES			
Chlorine Check / ml titrant	negative / 0 ml titrant				negative / 0 ml titrant				negative / 0 ml titrant			
Nitrification Inhibitor Added	NO				NO				NO			
Filtered	NO				NO				NO			
Bottle #	41	42	43	44	51	52	53	54	61	62	63	64
Sample Vol., ml	3.0	5.0	10.0	15.0	3.0	5.0	10.0	15.0	3.0	5.0	10.0	15.0
Bottle Vol., ml	300	300	300	300	300	300	300	300	300	300	300	300
DOi of Sample	1.92	1.92	1.92	1.92	1.14	1.14	1.14	1.14	0.71	0.71	0.71	0.71
Dec. Equiv. of % Sample	0.010	0.017	0.033	0.050	0.010	0.017	0.033	0.050	0.010	0.017	0.033	0.050
Dec. Equiv. of % Dil. Water	0.990	0.983	0.967	0.950	0.990	0.983	0.967	0.950	0.990	0.983	0.967	0.950
DOi of Bottle	7.87	7.83	7.73	7.63	7.87	7.82	7.71	7.60	7.86	7.81	7.69	7.57
DOf of Bottle	4.88	3.27	0.22	0.00	4.27	2.26	0.22	0.00	4.83	3.12	0.23	0.00
Depletion	2.02	3.60	6.56	6.70	2.62	4.59	6.54	6.66	2.06	3.73	6.51	6.64
Dilution Factor	1	1	1	1	1	1	1	1	1	1	1	1
Bottle Specific BOD	201.970	215.770	196.870	133.970	262.190	275.590	196.090	133.190	205.760	223.560	195.360	132.760
BOD of Useable Bottles	201.97	215.77			262.19	275.59			205.76	223.56		
Average Useable BOD	208.87				268.89				214.66			
Reportable BOD	208.9				268.9				214.7			
Reported BOD	BOD = 208.9				BOD = 268.9				BOD = 214.7			

Revision 7D 1/21/2004 WJM

* If no, adjust between 6.5 and 7.5

WG190060

Ammonia-N Data Sheet (S.M. 4500-NH3 D)

R246301

Date Analyzed: 6-16-09 Time: 11:30 Analyst: K.E.

Instrument: Orion 920A Calibration Date: 6-16-09 Slope: -58.0

ICV Number: WC096703 LCS Number: ~~WC096702~~ WC096703

RK 6-16-09 Curve WC096702

Lab Number	Sx Size Vol./Wt	mL after Distill	mL used for NH_3	Reading	Dilution	Ammonia (mg N/L)	
ICB/CCV	100ml			<0.10	1		
ICV/CCV	↓			10.0			
MB Dist	100ml	100ml		<0.10			
LCS Dist				9.0			
09061845-3				0.202		0.20	
MS			RK 6-16-09	~~0.969.62~~		9.6	99%
MSD				9.65		9.7	
09061839-3				1.21		1.2	
MS				10.9		11.	
MSD				10.7		11.	
09058176-8		Total		9.43		9.43	
~~09058176-8~~		100		~~7.63~~		~~7.63~~	** 6-16-09
~~09062514-2~~				~~0.247~~		~~0.25~~	
09062541-3				<0.1		<0.1	
ICB/CCB				<0.1		<0.1	
ICV/CCV				9.81			
09068176-1				13.7		14	
09068177-1				3.55		3.6	
09068178-1				8.35		8.4	
09068180-1				1.09		1.1	
09058176-8				9.47		9.47	
09068181-1				1.23		1.2	
09062514-2		Total		<0.10		<0.1	lab
~~09068182-1~~	09068182-1 100ml			<0.10		<0.1	
09068183-1				0.186		0.19	
09068184-1				0.42		0.42	
ICB/CCB				<0.10			
ICV/CCV				10.3			

RK 6-16-09

Ammonia-N Data Sheet (S.M. 4500-NH3 D)

Date Analyzed: _____ Time: _____ Analyst: _____

Instrument: _____ Calibration Date: _____ Slope: _____

ICV Number: _____ LCS Number: _____

Lab Number	Sx Size Vol / Wt	mL after Distill	mL used for NH_3	Reading	Dilution	Ammonia (mg-N/L)
ICB/CCV						
ICV/CCV						
MB						
LCS						
09068298-1	100 ml	100 ml		<0.1	1	<0.1
09068 299-1				0.383		0.38
300-1				0.323		0.32
301-1				0.378		0.38
302-1				0.286		0.29
309-1			<0.1	0.0199		<0.1
313-1				0.807		0.81
313-2				0.245		0.25
313-3				0.817		0.82
313-4				0.249		0.25
ICB/CCB				<0.10		
ICV/CCV				9.58		
09068314-1				0.179		0.18
09062663-4			<0.1	0.086		<0.1
5				42.9		43.
6				39.9		40.
7				48.3		48.
7MS				57.8		
7MSD				57.8		
ICB/CCB				<0.1		
ICV/CCV				9.88		

Phosphorus S.M. 4500-P E

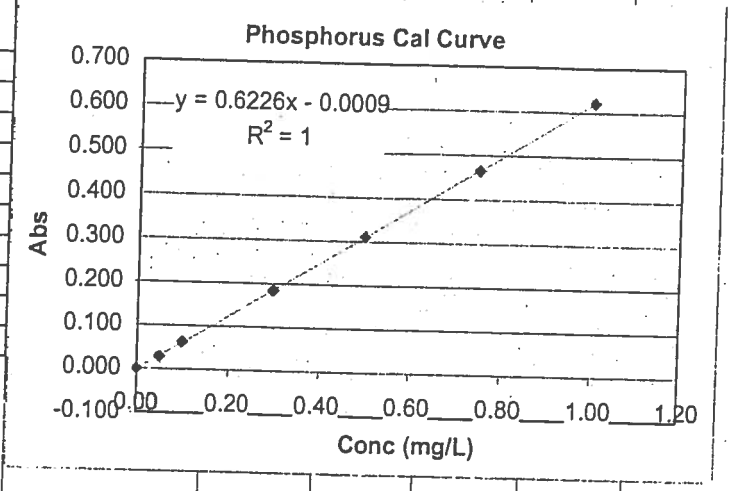
Prepared by: Claude Vitatoe
Date Prepared: 1/19/2009
Instrument/nm: UV1201/880nm

Spread sheet validation K.E. 11/01/07

Initial Cal Curve: wc084906
CCV: wc096713
LCS: wc096713

Standard (mg/L)	Absorbance
0.00	0.000
0.05	0.028
0.10	0.063
0.30	0.185
0.50	0.312
0.75	0.465
1.00	0.622

Slope (m): 0.62259
Intercept (b): -0.00086
Corr Coef (R^2): 0.99996
Acceptable



Analyst	Date / Time	Lab ID	Abs	Dil	Sx Size		Result (mg/L)	
DM	6/23/09 11:16	CCB	0.007	1	1		0.013	
DM	6/23/09 11:16	CCV	0.589	1	1		0.947	94.7%
DM	6/23/09 11:16	Method Blank	0.000	1	1		0.001	
DM	6/23/09 11:16	LCS	0.577	1	1		0.93	92.8%
DM	6/23/09 11:16	09062663-4	0.195	10	1		3.146	
DM	6/23/09 11:16	09062663-5	0.448	10	1		7.210	
DM	6/23/09 11:16	09062663-6	0.489	10	1		7.868	
DM	6/23/09 11:16	09062663-7	0.459	10	1		7.386	
DM	6/23/09 11:16	09063302-3	0.158	10	1		2.552	
DM	6/23/09 11:16	09068313-1	0.388	2	1		1.249	
DM	6/23/09 11:16	09068313-2	0.182	2	1		0.587	
DM	6/23/09 11:16	09068313-3	0.19	2	1		0.613	
DM	6/23/09 11:16	CCB	0.01	1	1		0.013	
DM	6/23/09 11:16	CCV	0.564	1	1		0.907	90.7%
DM	6/23/09 11:16	09068313-4	0.126	5	1		1.019	
DM	6/23/09 11:16	09068348-1	0.007	2	1		0.025	
DM	6/23/09 11:16	09068348-2	0.008	2	1		0.028	
DM	6/23/09 11:16	09068348-3	0.092	2	1		0.298	
DM	6/23/09 11:16	MS 09068348-3	0.232	2	1		0.748	
DM	6/23/09 11:16	MSD 09068348-3	0.241	2	1		0.777	
DM	6/23/09 11:16						#DIV/0!	
DM	6/23/09 11:16						#DIV/0!	
DM	6/23/09 11:16						#DIV/0!	
DM	6/23/09 11:16						#DIV/0!	
DM	6/23/09 11:16	CCB	0.007	1	1		0.013	
DM	6/23/09 11:16	CCV	0.565	1	1		0.909	90.9%

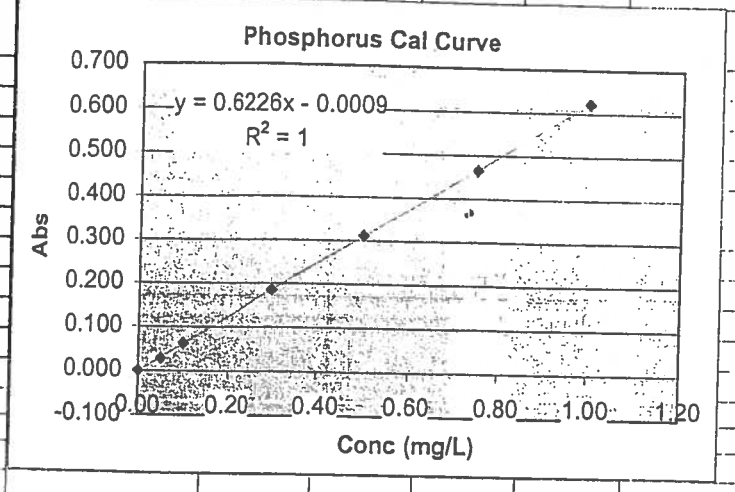
6/23/2009 12:32

Signed: [illegible] Date: 6/23/08 Page Number:

Phosphorus S.M. 4500-P E

Prepared by:	Claude Vitatoe		Initial Cal Curve:	wc084906
Date Prepared:	1/19/2009		CCV:	
Instrument/nm:	UV1201/880nm	Spread sheet validation K.E. 11/01/07	LCS:	

Standard (mg/L)	Absorbance
0.00	0.000
0.05	0.028
0.10	0.063
0.30	0.185
0.50	0.312
0.75	0.465
1.00	0.622
Slope (m):	0.62259
Intercept (b):	-0.00086
Corr Coef (R^2):	0.99996
	Acceptable



Analyst	Date / Time	Lab ID	Abs	Dil	Sx Size		Result (mg/L)	
DM	6/23/09 11:16	CCB	0.000	1	1		0.001	
DM	6/23/09 11:16	CCV	0.589	1	1			#######
DM	6/23/09 11:16	Method Blank	0.023 ~~0.000~~	1	1		0.001	
DM	6/23/09 11:16	LCS	0.577	1	1			#######
DM	6/23/09 11:16	09062663-4	0.195	10X 1	1		0.001	
DM	6/23/09 11:16	09062663-5	0.448	10X 1	1		0.001	
DM	6/23/09 11:16	09062663-6	0.489	10X 1	1		0.001	
DM	6/23/09 11:16	09062663-7	0.459	10X 1	1		0.001	
DM	6/23/09 11:16	09063302-3	0.158	10X 1	1		0.001	
DM	6/23/09 11:16	09068313-1	0.388	2X 1	1		0.001	
DM	6/23/09 11:16	09068313-2	0.182	2X 1	1		0.001	
DM	6/23/09 11:16	09068313-3	0.190	2X 1	1		0.001	
DM	6/23/09 11:16	CCB	0.007	1	1		0.001	
DM	6/23/09 11:16	CCV	0.564	1	1		0.001	
DM	6/23/09 11:16	09068313-4	~~0.158~~	0.126 5X 1	DM 6/23/09 1		0.001	10X 0.067 5X
DM	6/23/09 11:16	09068348-1	0.007	2X 1	1		0.001	
DM	6/23/09 11:16	09068348-2	0.008	2X 1	1		0.001	
DM	6/23/09 11:16	09068348-3	0.092	2X 1	1		0.001	
DM	6/23/09 11:16	MS 09068348-3	0.232	2X			#DIV/0!	
DM	6/23/09 11:16	MSD 09068348-3	0.241	2X			#DIV/0!	
DM	6/23/09 11:16						#DIV/0!	
DM	6/23/09 11:16						#DIV/0!	
DM	6/23/09 11:16						#DIV/0!	
DM	6/23/09 11:16						#DIV/0!	
DM	6/23/09 11:16	CCB	0.007	1	1		0.001	
DM	6/23/09 11:16	CCV	0.565	1	1		0.001	

6/23/2009 11:18

Signed: [signature] Date: 6/23/09 Page Number: _____

Hexane Extractable Material

Method 1664A

WorkGroup: WG-190322

Analyst	Date / Time	Lab ID	Flask #	pH < 2	CAL Wt (gm)	Flask Wt (gm)	Final Wt (gm)	Final ReWt. (gm)	Initial Wt (gm) (Bottle/Lid/Sample)	Final Wt (gm) (Bottle/Lid)	Sample Size (gm)
Mep	06-17-09	Calibration Chk	07-J35825-43*		0.0020						0 0020
↓	13:30	Calibration Chk	08-J38268-4*		1.0000						1.0000
	↓	Method Blank	40	X		93.9796	93.9796	93.9796			1000
		OPR (LCS)	41	X		91.0039	91.0426	91.0426			1000
		OPR (LCSD)	42	X		90.2049	90.2446	90.2446			1000
		09062663-2	43	X		92.4980	92.4995	92.4995	1370	479	891
		09068315-1	44	X		102.1116	102.1134	102.1129	1433	505	928
		09068315-2	45	X		91.4676	91.4687	91.4687	1426	508	918
		09068315-3	46	X		90.2453	90.2472	90.2473	1427	508	919
TPH	TPH 10ay	09068326-1	47	X		102.7969	102.7999	102.7994	1315	507	808
		09068333-2	48	X		94.1792	94.1849	94.1845	1411	516	895
		09068334-1	49	X		100.7228	100.7284	100.7282	1451	472	979
		09068336-1	50	X		80.9718	80.9741	80.9741	1454	479	975
		09068337-1	51	X		81.7657	81.7695	81.7692	1452	479	973
		09068338-1	52	X		94.1636	94.1665	94.1665	1428	479	949
		09068339-1	53	X		91.8068	91.8115	91.8114	1462	492	970
		09068340-1	54	X		102.1140	102.1183	102.1178	1425	476	949
		09068341-1	55	X		90.8448	90.8494	90.8488	1460	481	979
	}	09062476-1	56	X		92.9834	93.0166	93.0166	1305	480	825
Same Day		09068345-1	57	X		81.8991	81.9003	81.9003	1412	505	907
		09068346-1	58	X		89.2187	89.2228	89.2228	1400	509	891
		09068348-1	59	X		94.9381	94.9426	94.9422	1290	476	814
		09068348-2	60	X		94.2398	94.2439	94.2429	1259	470	789
		09068348-3	61	X		93.7034	93.7080	93.7076	1290	473	817
		Calibration Chk	07-J35825-43*		0.0020						0.0020
		Calibration Chk	08-J38268-4*		1.0000						1.0000

OPR: WC08-09-62/05 WC08-55-10

OPR Expiration: 10-28-09 03-09-10

OPR Conc (mg/L): 40 40

* Weights 07-J35825-43 & 08-J38268-4 are certified as Class 2 weights through 12/21/2012.

Balance: 21

Signature/Date: Mary Pk 06-17-09